

Appl. No. 10/620,400
Amdt. dated 11 Oct 04
Reply to Office action of 12 July 04

In the Claims:

This listing of claims replaces all prior versions and listings of the claims in this application:

1.-13. (Canceled).

14. (Currently Amended) A device for inserting a fastener into a substrate, the device comprising

a fastener holder configured to hold a plurality of fasteners,

a fastener pusher coupled for movement relative to the fastener holder, the fastener pusher being configured to engage an end of a fastener,

an actuator coupled to the fastener pusher, the actuator being configured to move the fastener pusher between an extended fastener-inserting position and a retracted position,

wherein the actuator comprises a pneumatically driven piston, the piston being biased by compressed air to move the fastener pusher between both the extended position and the retracted position.

15. (Original) The device of claim 14, wherein the fastener holder is exchangeable with a second fastener holder.

16. (Original) The device of claim 14, further comprising a second actuator, the second actuator including a handle and an operator-driven piston coupled to the handle.

17. (Original) The device of claim 14, further comprising a control apparatus for controlling the actuator, the control apparatus including a pneumatic valve.

18. (Original) The device of claim 17, wherein the control apparatus includes two pneumatic valves.

19. (Original) The device of claim 18, wherein the two pneumatic valves have a first default position and a second position.

20. (Original) The device of claim 19, wherein the actuator is actuated when the two pneumatic valves are in their second position.

21. (New) A fastener insertion device for inserting fasteners in a substrate or in the ground, the insertion device comprising:

a magazine configured to hold a plurality of fasteners and having an opening through which the fasteners are fed;

Appl. No. 10/620,400

Amdt. dated 11 Oct 04

Reply to Office action of 12 July 04

a drive member moveable in a first direction across the opening of the magazine by compressed gas to drive a fastener into the ground, and moveable in an opposite second direction across the opening by compressed gas.

22. (New) The device of claim 21 further comprising a pneumatic actuator including:

a pneumatic cylinder having an upper portion and a lower portion, the pneumatic cylinder being in fluid communication with a source of compressed gas; and

a piston having an upper end and an opposite lower end, the piston being disposed within the cylinder and moveable relative thereto, and the piston being coupled to the drive member.

23. (New) The device of claim 22 wherein the pneumatic actuator further comprises a charging chamber in fluid communication with both the source of compressed gas and with the pneumatic cylinder.

24. (New) The device of claim 23 wherein the pneumatic actuator further comprises a control apparatus in fluid communication with the charging chamber and the pneumatic cylinder and configured to control the introduction of compressed gas into the pneumatic cylinder.

25. (New) The device of claim 24 wherein the control apparatus is disposed between the charging chamber and the pneumatic cylinder.

26. (New) The device of claim 25 wherein the control apparatus comprises a first valve configured to direct compressed gas into the upper portion of the pneumatic cylinder to drive the piston in the first direction and a second valve configured to direct compressed gas into the lower portion of the pneumatic cylinder to drive the piston in the second direction.

27. (New) The device of claim 26, wherein both valves must be actuated in order to move a plunger in the pneumatic cylinder.

28. (New) The device of claim 27, wherein the valves comprise buttons which are actuated by applying pressure thereto.

29. (New) The device of claim 21, wherein the magazine is removable and is configured to house fasteners of different dimensions.

30. (New) The device of claim 29, wherein the fasteners comprise staples.

31. (New) The device of claim 29, wherein the fasteners comprise stakes.

Appl. No. 10/620,400
Amdt. dated 11 Oct 04
Reply to Office action of 12 July 04

32. (New) The device of claim 21, further comprising a manual actuator including

a handle coupled to the drive member and operable alone or with the aid of the compressed gas to move the drive member in the first direction, and

a spring bias disposed between the handle and the drive member and operable alone or with the aid of the compressed gas to move the drive member in the second direction.

33. (New) A fastener insertion device for inserting fasteners in a substrate or in the ground, the insertion device comprising:

a magazine configured to hold a plurality of fasteners and having an opening through which the fasteners are fed;

a pneumatic cylinder having an upper portion and a lower portion, the pneumatic cylinder being in fluid communication with a source of compressed gas;

a piston having an upper end and an opposite lower end, the piston being disposed within the cylinder and moveable relative thereto;

a drive member coupled to the piston and moveable therewith in a first direction across the opening of the magazine by the compressed gas entering the upper portion of the pneumatic cylinder to drive a fastener into the ground, and moveable in an opposite second direction across the opening by compressed gas entering the lower portion of pneumatic cylinder.